Tradition among the Gran Sabana Pemón

by John Eberlee

Nancy Kingsbury examined links between deforestation and decline of traditional agricultural practices

Venezuela's Gran Sabana — an extensive tract of forest and savanna in the country's southeastern region — faces severe environmental pressures similar to those felt in many regions of neighbouring countries in Latin America. According to a recent IDRC-supported study examining land management practices of indigenous peoples, rapid social and cultural change are propelling deforestation of the Gran Sabana.

Population pressures, the introduction of wage labour, and the decline of traditional ecological knowledge are accelerating the loss of forest cover in the Gran Sabana, says Nancy Kingsbury. She is a doctoral candidate at York University in Toronto and a recipient of the 1994 John G. Bene Fellowship in Social Forestry. Kingsbury says that solutions to the region's environmental woes lie in secure land tenure and the adoption of appropriate forest conservation techniques, which could help slow deforestation in the area.

Kingsbury's goal was to determine whether the traditional shifting cultivation of the Pemón Amerindians is the cause of deforestation in the Gran Sabana, a widely held view in Venezuela. In fact, her data suggest the opposite: the *decline* of traditional agricultural methods may be the real culprit.

Long recovery period

Located where Venezuela borders Guyana and Brazil, the Gran Sabana is famous for its "table- top" mountain range that includes the Auyán-tepuí, site of the Angel Falls, the highest waterfall in the world. The region also features some of the most infertile soils in Latin America. After being used for agriculture,

Gran Sabana soils and forests can take from 50 to 100 years to recover, compared to 20 years elsewhere in the tropics.

To adapt to these conditions, Pemón communities have traditionally maintained very low population densities, while carefully choosing their sites for growing crops. "Shifting agriculture is sustainable if it's done for short periods of time over a large area," explains Kingsbury.

In recent decades, however, there has been a significant decline in the amount of forest cover. One of the first groups to raise the alarm was EDELCA, the regional hydroelectric authority, whose dams have caused wide-scale flooding and displaced some Pemón communities north of the Gran Sabana, notes Kingsbury. Concerned about the impact of deforestation on the hydrological regime, including rainfall, in the region, EDELCA launched a forest fire control program there in 1981.

Dramatic difference

Kingsbury's study revealed a dramatic difference in the degree of deforestation in two Pemón communities, including Kavanayen, a rapidly growing village centred around a mission, and Monte Bello, a smaller, more isolated community that enjoys above-average soil conditions.

After being cleared for cultivation, forests returned to 50% of the fields in Kavanayen, compared to 75% of the fields in Monte Bello. She explains that in Kavanayen, the decisions about where to grow crops is now based more on proximity to the village than on soil fertility, slope, and other key considerations. Kingsbury blames this on social and cultural disruption. In both villages, the population growth rate has been phenomenal, more than doubling between 1982 and 1995. But population density is much higher in Kavanayen, where people have primarily settled around the mission to access jobs, social services, and medicine. As a result of incorporation into the non-indigenous economy and educational system, traditional knowledge and use of sustainable agricultural practices are being lost.

"Many younger men hold seasonal jobs, so they don't have enough time to cut gardens in the more distant old growth forests," she says. "They prefer instead to cut down the younger, smaller trees in the nearby secondary forests because it's faster."

A stake in sustainability

According to Kingsbury, "the trend in Gran Sabana is toward larger communities such as Kavanayen, which are less prone to follow sustainable land practices." Despite this, she believes that deforestation rates can be slowed, if not halted. One solution is to give the Pemón clear title to their land, which they now lack. Without clear title, people have little stake in ensuring the land is sustainably managed.

Kingsbury also recommends the use of "green manure" — a mixture of crop leftovers, leaves and branches — to fertilize fields between growing seasons. Tested successfully in Central America, green manure is less expensive than chemical inputs such as nitrogen fertilizers and pesticides, she says. And, "compost quickly breaks down in the tropics, so this is an efficient means of replenishing the soils." Kingsbury adds that on a political level, "controls need to be placed on the extensive gold mining activities in the region, which are also destroying forests."

John Eberlee is an Ottawa-based writer on health and development issues.

Resource Person:

Nancy Kingsbury, Graduate Program in Geography, York University, 4700 Keele Street, North York, Ontario M3J 1P3; e-mail: kingsbur@web.net

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Aboriginal Tourism in Venezuela: Walking Lightly on the Land

by Lauren Walker

ORPIA members welcome delegates to aboriginal tourism workshop (Photo: Chusa Gines)

Every year, thousands of travelers head off the "beaten path" in search of local atmosphere and cultural enrichment in exotic locations. Under the right circumstances, the meeting of foreign tourists with local inhabitants can result in much goodwill and mutual appreciation. At its best, tourism of this kind creates a kinship among cultures. At its worst, however, tourism disrupts indigenous communities and, because of the increased development and traffic, adversely affects the sustainability of local environments.

Such has been the case in the tropical jungles of Amazonas, in southern Venezuela, which some 60,000 indigenous people call home. Insensitive tourism operators there have herded throngs of foreigners through native villages without permission. Unwelcome visitors have poked through private homes, trampled through sacred places, and disrupted religious ceremonies, leaving in their wake a stream of litter and a sense of violation on the part of the local inhabitants. Not surprisingly, the Amazonians have been reluctant to share their world with "outsiders."

Birth of ORPIA

As their lands and communities disintegrated under influences beyond their control, Venezuelan Indians were challenged to find a way to survive and prosper in the modern economic world without destroying their traditional culture or their fragile environment. In 1993, representatives from all 19 Amazonian tribes held the First Congress of Indigenous Peoples of the Amazon in the state capital of Puerto Ayacucho to address the key issues affecting their lives. The Congress resulted in the creation of ORPIA: a democratic

organization, under the direction of Guillermo Guevara, with a mandate to support, defend, and promote indigenous peoples' interests.

While reviewing the long-term economic options available to their communities, ORPIA leaders met with Canadian embassy officials in Caracas. The Canadians recommended that tribespeople look into nature-based tourism or ecotourism, an activity that would let them capitalize on their traditional knowledge of local geography, flora and fauna. In Canada, nature-based tourism is one of the fastest growing sectors of the aboriginal economy, employing more than 8,000 people annually. In 1994, the industry generated more than $250 million in revenue.

Aboriginal Tourism Workshop

Previously, a few Amazon villages had tried organizing tourist camps, but lacked the necessary contacts and operational know-how needed to succeed. To assist ORPIA, the Canadian Embassy organized a week-long workshop on Indigenous People in Ecotourism, held in Puerto Ayacucho in March 1994. Funding for this event was provided by three Canadian government departments as well as IDRC and the Canadian International Development Agency (CIDA).

For the workshop, IDRC arranged the participation of a delegation from the Canadian National Aboriginal Tourism Association (CNATA). CNATA shared its experiences in ecotourism with 70 Amazonian Indians, led by Guillermo Guevara. The CNATA presentation included a 17-minute video, *The Stranger, the Native and the Land*, and a 100-page training manual, both of which had been translated into Spanish. The Canadians stressed the importance of community participation in the organization and planning of tourism activities. They also urged indigenous communities to establish and enforce ground rules by offering tourists controlled access to their lands, and to insist on a fair share of the profits.

Impact Studies

The workshop convinced ORPIA that properly managed tourism could greatly benefit local indigenous communities. With help from IDRC, the aboriginal organization is investigating the cultural, environmental, and economic impact of current and potential tourism activities involving indigenous peoples in the state of Amazonas. Meanwhile, CNATA has promised to provide further guidance and support, as the Venezuelans establish an ecotourism infrastructure.

CNATA's president, Barry Parker, is confident that the Amazon Indians will succeed. "They have the three critical resources for nature based tourism" he concludes: "a wealth of traditional knowledge, a largely untouched environment, and beautiful people."

Lauren Walker is an Ottawa-based writer and editor.

Resource Persons:

Barry Parker, President, Canadian National Aboriginal Tourism Association, 875 Bank Street - 2nd Floor, Ottawa, Ontario K1S 3W4, Canada; Tel: (613) 567-7566; Fax: (613) 233-4329

Guillermo Guevara, Chief, Organización Regional de Pueblos Indigenas de Amazonas (ORPIA), Av. Orinoco, Urbanizacion Los Urios, Puerto Ayacucho, Estado Amazonas, Apartado Postal No. 24, Venezuela; Tel: (58-048) 21-2063

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Ancient Ways Guide Modern Methods

by Tom Roach in Nairobi

The sun had not risen when Shala left her family home in the Northern Maghreb. She enjoyed the early morning walk through the fields of her family's market gardens. Now in her seventies, she could remember walking behind her grandmother just as her youngest granddaughter was doing now. Together they listened to the birds, admired the dew glistening on the rows of vegetables and discussed the fact that fewer and fewer gardens were being cultivated.

Ahead of them lay a ridge marking the boundary between the gardens and the scrub-covered rangelands that stretched away to the mountains of the south. As the sun rose and the day warmed, Shala and her granddaughter redirected the flow of water coming from springs in the base of the ridge, to their garden plots. Shala was using a water collection and distribution system designed by Roman engineers two thousand years earlier. Known as horizontal wells, the skills required for their management have been passed down by word of mouth since that time. Today, availability of labour is a limiting factor in maintaining and operating the wells.

This and other examples of indigenous knowledge were discussed by more than 30 specialists at a workshop in January organized by the North Africa and Middle Eastern Regional Office of IDRC. The Cairo workshop focused on investigating the role of indigenous knowledge in the management of resources in arid and semi-arid areas. It revealed just how complex and dynamic are the systems of traditional land management based upon local knowledge.

Participants discussed situations where knowledge is being lost and land degradation and desertification are occurring due to the introduction of systems of agriculture that disturb the soils. Other factors of land degradation include changes in herd management, linked to limitations in freedom and scale of movement brought about by settlements as well as increases in populations and stocks. They also heard about examples where new lore is being gathered in response to changes in the environment. They recommended strongly that governments, and their officials, consider indigenous knowledge in the development and implementation of policies. The delegates also recommended that the preservation and protection of indigenous knowledge become a priority for policy makers.

OVERSTEPPING CARRYING CAPACITY

Dr. Mohammed El Kassas, widely honoured as the father of the environmental movement in Egypt, explained that when human activities overstep the natural carrying capacity of the land, a variety of factors and processes or "triggering events" lead to damage of the soil and desertification. He added that most drylands are characterized by low and variable rainfall and fragile soils, which makes them very prone to desertification.

The containment of desertification involves a combined variety of corrective legal, financial, technical and

policy actions that provide the basis for the sustainable development of land and water resources in affected areas. It is therefore important that local people, who are the holders of indigenous knowledge, be heavily involved in decisions affecting the resources upon which they rely. For this reason, participants recommended that analysts and decision makers take indigenous knowledge into full account when planning and implementing studies and development projects.

Traditional knowledge is often denigrated and ignored in the pressure to develop the countries of the developing world. Dr. Donald Cole, from the American University of Cairo, stressed that nomadic pastoralism developed as a specialized and highly skilled production system after the emergence of irrigation-based agriculture in the Middle East. This system provides a significant example of the development of indigenous knowledge in response to a specific set of environmental conditions. It also demonstrates that the incorporation by scientific knowledge of indigenous expertise is an important, although too often ignored, reality.

A major characteristic and advantage of indigenous management systems is the coherence with which local populations perceive, understand and integrate interactions between the different components of the milieu in which they live. Another important characteristic of these systems is their ability to adapt to the changing climatic conditions typical of their environment. In particular the workshop recognized that traditional pastoral and agropastoral communities had complex social and economic roles to play in their regions and, in fact, offered numerous sustainable responses to the degradation and desertification problems of the semi-arid lands. Because of their potential and socioeconomic importance, these dryland management techniques need to be protected and enhanced.

VARIATIONS ON NATURE

As Dr. Abdel Ghaffar El Ahmed, a Sudanese anthropologist, explained, "a distinctive feature of indigenous knowledge is that it encompasses the continuum between the landscape and the vegetation that exists upon it so that the two can be manipulated by people in the process of producing food." It should be understood, he continued, that African farming and herding is a series of variations upon the themes and processes observed within nature. Knowledge of ecological processes gives resource users the flexibility to direct processes to their own advantage. He added that "African countries need to redesign their self images and create a new science-led and culturally aware future."

More light was thrown upon the importance of indigenous knowledge in the lives of the people of Africa by Dr. Raphael Ndiaye, an NGO researcher from ENDA, Dakar. He believes that "all who are involved in development have to move from participation to partnership." Indigenous knowledge is important for the preservation of an individual's identity as well as for the preservation of a nation because, "a people without a memory is not a nation." He suggested to the workshop that strategies of communication must be developed that allow for the free exchange of information. "Messages must also go from local people to scientists and back again," he added.

It must also be remembered, however, that indigenous knowledge is owned by the people who hold it and use it. This means that while scientists and others should be able to work with communities in gathering information, the community and its members should have the ultimate say in how that information is used or to whom it is given. This issue raised considerable debate during the discussions. The participants felt strongly that indigenous knowledge was generally location specific and that its transfer to other locations and cultures was a complex process.

FEET ON THE GROUND

Discussion at the workshop highlighted the need to improve indigenous knowledge so as to improve modern knowledge. For their part, practitioners must be able to understand and appreciate the basis of the coherence and flexibility of the indigenous knowledge systems. Dr. Ndiaye reminded participants that "it must be remembered that the person who works and lives or dies with the results of development is the man working in the field. The researcher, the development worker, the environmentalist, they all deal with

complicated matters but each must have his or her feet firmly in the soil along with those of the farmer."

The workshop concluded that indigenous knowledge, as it relates to desertification, comprises a wide range of accumulated local experience about natural resource use and management techniques, institutional and organizational arrangements as well as beliefs and values. This traditional knowledge can certainly be enhanced by the infusion of modern scientific knowledge: the challenge is to evolve the right mix between the two. Hence, given the importance of successfully combining traditional and modern knowledge systems, research should be carried out on how to best achieve this aim. One source of information might be to study how adaptations and innovations are being incorporated into indigenous systems by local communities. In designing research and interventions the workshop recommended that the cultural, ethical, spiritual and institutional aspects of indigenous knowledge systems be given full consideration.

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